AMENDMENTS TO THE CLAIMS

Please amend Claims 1, 5, 7, 15, 22, 24, and 26 as shown in the following complete list of pending claims. Please add Claims 32-36. Please cancel Claims 16, 19-20, and 25. This Listing of Claims will replace all prior versions and listings of claims in the present patent application:

LISTING OF CLAIMS

Please amend the claims as follows:

1. (Currently amended) A method comprising:

segmenting a message into a plurality of segments;

determining a fragment size and a number of fragments for each of the segments;

dividing the segments into a plurality of fragments using the fragment size and the number of fragments; and

transmitting the fragments with information regarding reconstruction of a fragmented segment.

2. (Cancelled).

3. (Previously presented) The method of claim 1, further comprising:
applying a segment parameter to each segment.

4. (Previously presented) The method of claim 1, further comprising:
applying a segment indicator to each fragment.

5. (Currently amended) A wireless receiving system comprising:

means for building segments of a message from a plurality of transmitted frames;

means for identifying a missing segment of the message;

~~means for requesting a retransmission of the missing segment; and~~

means for extracting a segmentation indicator, wherein the segmentation indicator is received from the transmitting side and indicates if segmentation is active for retransmission requests[[.]]; and

means for requesting a retransmission of the missing segment,

wherein if it has been identified that a segment is missing, a retransmission of the missing segment is requested if the segmentation indicator is active.

6. (Previously presented) The receiving system of claim 5, further comprising:

means for segmenting a message to form a plurality of segments;

means for determining a fragment size and a number of fragments for each of the segments;

means for fragmenting the segments to form a plurality of fragments using the fragment size and the number of fragments;

means for transmitting the plurality of fragments; and

means for retransmitting one of the plurality of fragments.

7. (Currently amended) A method for receiving transmissions in a wireless communication system, comprising:

receiving a transmission frame having a plurality of segments, each segment having a plurality of fragments, wherein [[the]] a fragment size and number of fragments is determined for each of the segments;

determining if any of the plurality of segments is missing;

if no segment is missing, reconstructing the message;

determining if segmentation is active for retransmission from a segment indicator received from a transmitting side; and

if a segment is missing and segmentation is active, requesting retransmission of the missing segment.

8. (Previously presented) The method of claim 7, further comprising:

processing fragments of the transmission frame.

9. (Previously presented) The method of claim 7, further comprising:

determining an end of a segment; and

reconstructing the segment.

10. (Previously presented) The method of claim 7, further comprising:

if a segment is missing, sending a negative acknowledge message to the transmitter of the transmission frame.

11. (Previously presented) The method of claim 7, further comprising:

if no segment is missing, sending an acknowledge message to the transmitter of the transmission frame.

12. (Previously presented) The method of claim 7, further comprising:

determining a start of a segment; and

storing information in a buffer from the start of the segment.

13. (Previously presented) The method of claim 12, further comprising:

if the buffer is not empty at the start of a segment, flushing the buffer.

14. (Previously presented) The method of claim 13, further comprising:

if a fragment is not a start of segment and the buffer is empty, marking the fragment as missing.

15. (Currently amended) A wireless apparatus, comprising:

receiver for receiving a plurality of transmission frames having a plurality of segments, each segment having a plurality of fragments, wherein [[the]] a fragment size and number of fragments is determined for each of the segments;

segment extraction unit coupled to the receiver~~, adapted to identify and reconstruct~~ for identifying and reconstructing segments within a transmission frame according to segment

indicators associated with segments and received from a transmitting side, wherein at least one of the segment indicators indicates when segmentation is active for retransmission requests; and

message reconstruction unit coupled to the segment extraction unit~~, adapted to determine~~ for determining any missing segment within a message and to request retransmission of the missing segment.

16. - 20. (Cancelled).

21. (Previously presented) The method of claim 4, wherein the segment indicator indicates if segmentation is active for retransmission requests.

22. (Currently amended) An apparatus adapted for operation in a wireless communication system, comprising:

means for segmenting a message into a plurality of segments;

means for determining a fragment size and a number of fragments for each of the segments;

means for dividing the segments into a plurality of fragments using the fragment size and the number of fragments; and

means for transmitting the fragments with information regarding reconstruction of a fragmented segment[[;]].

~~means for receiving a retransmission request for a first segment of the plurality of segments;~~

~~means for retransmitting the first segment if segmentation is active for retransmission requests; and~~

~~means for retransmitting the plurality of segments in response to the request if segmentation is inactive for retransmission requests.~~

23. (Previously presented) The receiving system of claim 5, wherein segment retransmission requests for a segment or a portion of a message are supported for active segmentation, and

wherein all segments of the message are retransmitted for inactive segmentation.

24. (Currently amended) [[A]] The method of Claim 1, further comprising:

including an active or inactive segment indicator in the plurality of segments when transmitting the fragments with information regarding reconstruction of the fragmented segment;

receiving a retransmission request for a first segment of the plurality of segments;

if segmentation is active for retransmission requests, retransmitting the first segment; and

if segmentation is inactive for retransmission requests, retransmitting the plurality of segments in response to the requests.

25. (Cancelled).

26. (Currently amended) The method of claim 1 further comprising:

determining a first fragment size and a first number of fragments for a first segment;

dividing the first segment into the first number of fragments having the first fragment size;

determining a second fragment size and a second number of fragments for a second segment; and

dividing the second segment into the second number of fragments having the second fragment size, wherein the first and second numbers of fragments are different.

27. (Previously presented) The method of claim 1, wherein each fragment comprises a frame.

28. (Previously presented) The method of claim 1, wherein each fragment is a Service Data Unit.

29. (Previously presented) The method of claim 1, wherein each fragment has a sequential fragment identifier.

30. (Previously presented) The method of claim 1, wherein each fragment includes a segment identifier.

31. (Previously presented) The method of claim 30, wherein each segment identifier has at least two bits.

32. (New) A computer-readable medium having computer-readable instructions which, when executed, carry out a method comprising:

segmenting a message into a plurality of segments;

determining a fragment size and a number of fragments for each of the segments;

dividing the segments into a plurality of fragments using the fragment size and the number of fragments; and

transmitting the fragments with information regarding reconstruction of a fragmented segment.

33. (New) A computer-readable medium on a wireless receiving system having computer-readable instructions which, when executed, carry out a method comprising:

building segments of a message from a plurality of transmitted frames;

identifying a missing segment of the message;

extracting a segmentation indicator, wherein the segmentation indicator is received from the transmitting side and indicates if segmentation is active for retransmission requests; and

requesting a retransmission of the missing segment,

wherein if it has been identified that a segment is missing, a retransmission of the missing segment is requested if the segmentation indicator is active.

34. (New) A base station comprising:

at least one processor;

a memory operatively coupled to the processor, the memory storing program instructions that when executed by the processor, cause the processor to:

segment a message into a plurality of segments;

determine a fragment size and a number of fragments for each of the segments;

divide the segments into a plurality of fragments using the fragment size and the number of fragments;

transmit the fragments with information regarding reconstruction of a fragmented segment;

receive a retransmission request from a receiving system for a first segment of the plurality of segments;

retransmit the first segment to the receiving system if segmentation is active for retransmission requests; and

retransmit the plurality of segments in response to the request to the receiving system if segmentation is inactive for retransmission requests.

35. (New) A remote terminal comprising:

at least one processor;

a memory operatively coupled to the processor, the memory storing program instructions that when executed by the processor, cause the processor to:

build segments of a message from a plurality of transmitted frames;

identify a missing segment of the message;

extract a segmentation indicator, wherein the segmentation indicator is received from a transmitting side and indicates if segmentation is active for retransmission requests; and

request a retransmission of the missing segment,

wherein if it has been identified that a segment is missing, a retransmission of the missing segment is requested if the segmentation indicator is active.

36. (New) An apparatus for wireless communication systems comprising:

a processing module configured to 1) segment a message into a plurality of segments, 2) determine a fragment size and a number of fragments for each of the segments, and 3) divide the segments into a plurality of fragments using the fragment size and the number of fragments; and

a transmitter for transmitting the fragments with information regarding reconstruction of a fragment segment.